

WHAT IS CLAIMED IS:

Claim 1
A method for confirming and establishing frame synchronization for sustaining the frame synchronization for a communication channel between a user and a network, the method comprising the steps of:

- (1) establishing a chip synchronization for the communication channel;
- (2) as the chip synchronization is established, using the chip synchronization for establishing the frame synchronization;
- (3) determining maintenance of the established frame synchronization; and
- (4) restoring the frame synchronization by using pilot bit patterns, when the frame synchronization is failed.

2. A method as claimed in claim 1, wherein the step (3) includes the steps of: confirming the chip synchronization when the frame synchronization is failed, and establishing the chip synchronization and the frame synchronization when the chip synchronization is failed.

Claim 3
A method as claimed in claim 1, wherein a pilot sequence used for the frame synchronization confirmation and establishment is a pilot sequence which provides

maximum correlation results of opposite polarities at a starting point or middle point of a correlation period for each received frame.

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4. A method for confirming frame synchronization, comprising the steps of: establishing the frame synchronization in an uplink or downlink channel; and, confirming a sustenance of the established frame synchronization by using a preset pilot sequence,

wherein the pilot sequence used in the confirmation of sustenance of the established frame synchronization provides maximum correlation results of opposite polarities at a starting point and a middle point of a frame correlation period.

5. A method as claimed in claim 4, wherein the pilot sequence is a combination of pilot symbols in forms of (a, \bar{a}) .

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A method for confirming a frame synchronization, comprising the steps of:
(1) a network side or a user equipment side establishing the frame synchronization by using timing information from an opposite side;
(2) confirming the established frame synchronization by using a pilot symbol pattern which provides a correlation value of "0" at points of a correlation period for each received frame except a starting point and a middle point thereof; and,

(3) if it is determined in the step (2) that the frame synchronization is failed, carrying out the step (1) again.

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